

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-3 (canceled).

4. (currently amended) An antifriction bearing comprising:
an inner bearing ring;
an outer bearing ring spaced outward from and extending around the inner bearing ring;
[[a]] rolling antifriction elements in rolling contact with the inner and the outer rings;
sensors at locations around the rings for determining length changes in the rolling
contacts between the antifriction elements and one of the rings, wherein the sensors further
comprise devices sensor units for determining the length change in the rolling contact for several
of the antifriction elements over respective arcuate regions of the rings and the sensor units each
are operable to define region vectors for the length changes of the rolling contacts in their
respective regions;

an interface connected with the sensor units for receiving the region vectors from each of
the sensor ~~unit~~ units; and

an evaluation unit for evaluating the region vectors supplied by the interface for
determining a condition of the bearing that is dependent upon the length change in the rolling
contacts between the antifriction elements and the one ring.

5. (previously presented) The antifriction bearing of claim 4, wherein the one ring is
the outer ring and the sensors are disposed at the outer ring.

6. (previously presented) The antifriction bearing of claim 5, further comprising an
access device in the outer ring enabling access of the sensors to the antifriction elements between
the rings.

7. (previously presented) The antifriction bearing of claim 4, wherein the evaluation unit is disposed outside the bearing.

8. (previously presented) The antifriction bearing of claim 4, wherein the sensor units are arrayed in three groups to provide at least three region vectors to the interface.

9. (previously presented) The antifriction bearing of claim 4, wherein the evaluation unit is operable to evaluate the region vectors from each of the sensors over a region of the one ring comprises an ASIC.

10. (previously presented) The antifriction bearing of claim 9, wherein the ASIC is disposed on the bearing and produces the region vector for the respective region.

11. (previously presented) The antifriction bearing of claim 10, wherein the region ASIC is operable to carry out a vector addition of individual vectors which are determined by the sensors in order to form an overall vector for the region.

12. (previously presented) The antifriction bearing of claim 11, wherein the ASICs and the interface are operable so that the region vectors from the three region ASICs are continuously present at the interface.

13. (previously presented) The antifriction bearing of claim 11, wherein each of the ASICs transmits an item of information containing the magnitude of the force and the direction of the force in the respective region.

14. (previously presented) The antifriction bearing of claim 13, wherein the evaluation unit is operable to add vectorially the region vectors from each of the regions and to provide a vector corresponding to the total loading of the antifriction bearing.